

## (12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization International Bureau



(43) International Publication Date  
3 June 2004 (03.06.2004)

PCT

(10) International Publication Number  
**WO 2004/046743 A1**

(51) International Patent Classification<sup>7</sup>: **G01R 33/28** (74) Agent: GILL JENNINGS & EVERY; Broadgate House, 7 Eldon Street, London EC2M 7LH (GB).

(21) International Application Number:

PCT/GB2003/004987

(81) Designated States (*national*): AE, AG, AL, AM, AT, AU,

(22) International Filing Date:  
18 November 2003 (18.11.2003)

AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(25) Filing Language: English

(84) Designated States (*regional*): ARIPO patent (BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

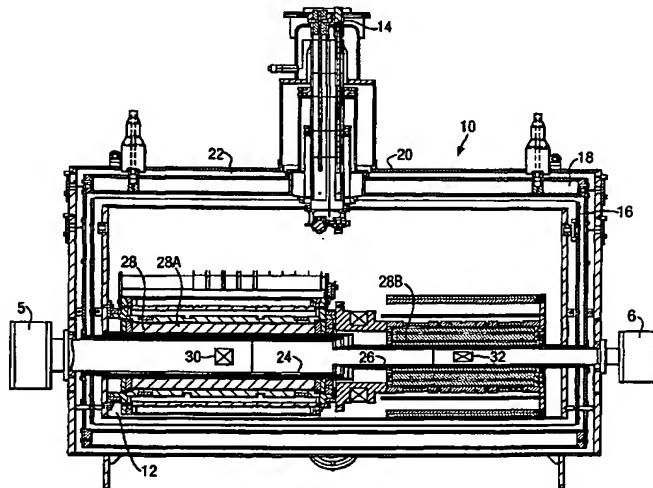
(26) Publication Language: English

Published:

— with international search report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: SAMPLE INSPECTION APPARATUS FOR COMBINING NMR WITH ESR OR ICR-MASS SPECTROSCOPY



**WO 2004/046743 A1**

(57) Abstract: Sample inspection apparatus comprises a pair of magnet assemblies (28A, 28B) located in a common cryostat (10) and surrounding respective bores (24, 26) at room temperature so as to define corresponding working regions (30, 32) in the bore. A first, NMR probe (6) can be inserted in one of the bores to bring a sample into the corresponding working region, the magnetic field in that working region having a homogeneity or profile suitable for performing a NMR experiment. A second probe (5) can be inserted in the other of the bores to bring a sample into the other working region, the magnetic field in that working region having a homogeneity or profile suitable for performing a different experiment on the sample.